AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- (Currently amended) A method for optimizing an active decision making process, comprising:
 - a. creating a simulation model for the active decision making process, wherein the simulation model comprises a utility function that encodes profit and loss;
 - b. generating a plurality of alternative decisions at a choice point in the active decision making process;
 - c. for one of these alternative decisions, generating a simulation of the future decision making process using the simulation model; and
 - d. analyzing the result of this simulation to select a decision for the choice point.
- 2. (Original) The method of claim 1, wherein the simulation model comprises a stochastic component.
- 3. (Original) The method of claim 2, wherein the stochastic component comprises a policy for choosing among alternative decisions.
- 4. (Canceled)
- 5. (Currently amended) The method of claim 1, wherein the simulation model comprises of a Bayesian network.

- 6. (Currently amended) The method of elaim 3claim 5, wherein the Bayesian network comprises hierarchical variables, abstract data types, differentials, user-defined functions, or and POMDPs.
- 7. (Original) The method of claim 1, further integrating the active decision making process with an external application.
- 8. (Original) The method of claim 7, wherein the external application comprises a simulation system.
- 9. (Original) The method of claim 7, wherein the simulation model is updated using the data obtained by monitoring the external application.
- 10. (Original) The method of claim 1, wherein the simulation model is updated using the result of the simulation.
- 11. (Currently amended) A computer implemented system for optimizing an active decision making process, comprising:
 - a. a simulation model for the active decision making process, wherein the simulation model comprises a utility function that encodes profit and loss;
 - b. generation of a plurality of alternative decisions at a choice point in the active decision making process;
 - c. for one of these alternative decisions, generation of a simulation of the future decision making process using the simulation model; and
 - d. analysis of the result of this simulation to select a decision for the choice point.
- 12. (Original) The system of claim 11, wherein the simulation model comprises a stochastic component.

- 13. (Original) The system of claim 12, wherein the stochastic component comprises of a policy for choosing among alternative decisions.
- 14. (Cancelled).
- 15. (Currently amended) The system of claim 11, wherein the simulation model comprises of a Bayesian network.
- 16. (Currently amended) The system of <u>claim 13 claim 15</u>, wherein the Bayesian network comprises hierarchical variables, abstract data types, differentials, user-defined functions, <u>or-and POMDPs</u>.
- 17. (Original) The system of claim 11, further integrating the active decision making process with an external application.
- 18. (Original) The system of claim 17, wherein the external application comprises a simulation system.
- 19. (Original) The system of claim 17, wherein the simulation model is updated using the data obtained by monitoring the external application.
- 20. (Original) The system of claim 11, wherein the simulation model is updated using the result of the simulation.